

REMARKS

This application has been reviewed in light of the Office Action dated July 3, 2003. Claims 1, 3, 4, 7, 12-16, 18, and 19 are presented for examination. Claims 1, 16, and 19, the independent claims, have been amended to define more clearly what Applicants regard as their invention. Favorable reconsideration is requested.

Claims 1, 3, 4, 7, 12-16, 18, and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,031,543 (*Miyashita et al.*).

As shown above, Applicants have amended independent claims 1, 16, and 19 in terms that more clearly define what they regard as their invention. Applicants submit that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in claim 1 is an image processing apparatus. The image processing apparatus includes a saturation calculation unit that calculates saturation information of an image, and a saturation conversion characteristic generating unit that generates a saturation conversion characteristic on the basis of a conversion line or curve corresponding to a conversion condition for a low-saturation side and a conversion line or curve corresponding to a conversion condition for a high-saturation side. The image processing apparatus further includes a saturation conversion unit that converts the saturation of the image on the basis of the saturation conversion characteristic.

One important feature of claim 1 is that the saturation conversion characteristic generating unit generates a saturation conversion characteristic on the basis of a conversion line or curve corresponding to a conversion condition (A1) for a low-saturation side, and a conversion line or curve corresponding to a conversion condition (A2) for a high-saturation side.

Accordingly, the saturation conversion characteristic is generated on the basis of multiple conversion conditions (A1 and A2). By virtue of this arrangement, appropriate saturation correction can be achieved at both the low-saturation and high-saturation sides.

*Miyashita et al.* relates to an image processor for retouching color images. The *Miyashita et al.* system separately adjusts the brightness, saturation (chroma) and hue of a digital image.

The Office Action states that *Miyashita et al.* discloses a saturation conversion characteristic on the basis of conversion lines and curves corresponding to each conversion condition for a low-saturation side and a high saturation side, and cites column 6, lines 26-30, column 11, lines 41-46, and Figures 10 and 34 as support therefor. However, Applicants respectfully disagree with this reading of *Miyashita et al.* Figures 10 and 34 merely depict examples of user interfaces related to manipulating the saturation. The result of the saturation manipulation is reflected in conversion curves 104 and 105 for values  $a^*$  and  $b^*$ , respectively, as shown in Figure 16. Figure 44 of *Miyashita et al.* depicts an example of a gradation conversion process (generating conversion curves 104 and 105). Specifically, Figure 44 shows that conversion curves 104 and 105 are shifted counterclockwise (become more vertical) when circle 106 is enlarged by shifting lever 120 in a positive direction. Since only one conversion curve is used from low-saturation to high-saturation, the *Miyashita et al.* method is not able to separately manipulate the conversion characteristic at a low-saturation side and a high-saturation side.

In contrast, the saturation conversion characteristic of claim 1 is generated on the basis of multiple conversion conditions A1, and A2, as discussed above. Accordingly, the saturation conversion characteristic of claim 1 can be separately manipulated at the low-saturation side and the high-saturation side.

Applicants submit nothing in *Miyashita et al.* would teach or suggest a saturation conversion characteristic generating unit that generates a saturation conversion characteristic on the basis of a conversion line or curve corresponding to a conversion condition for low-saturation side and a conversion line or curve corresponding to a conversion condition for a high-saturation side, as recited in claim 1.

Accordingly, Applicants submit that claim 1 is clearly allowable over *Miyashita et al.*

Independent claims 16 and 19 are method and recording medium claims, respectively, corresponding to apparatus claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with claim 1.

The other rejected claims in this application depend from one or the other of independent claims, and therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

  
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